



## Parents and Dentists' Knowledge, Experience and Practice Regarding Oral Health Care Toward Children with Autism at Dubai Health Authority and Dubai Autism Center in 2019

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### Abstract

**Background:** Purpose: To clarify if there are any problems that are faced by the dentists and the parents regarding the dental procedures and the oral health care in children with autism spectrum disorder (ASD) in Dubai Health Authority and Dubai Autism Center.

**Methods:** There were 86 questionnaires distributed to parents of autism children, and 73 questionnaires were distributed to dentists, a total of 25 questionnaires were collected from parents of autism children with a response rate of 29.07% and a response rate of 52.05% with a total of 38 questionnaires were collected from dentists, the study took place in the Public Health Centres in Dubai Health Authority and Dubai Autism Center, Dubai, United Arab of Emirates.

**Results:** Approximately 40% of the children of autism did not visit the dentist at all, and 35% of the child's oral health care was fair. 72% of the parents didn't know the autism type of their children whereas that 56% of the parents were having a high school certificate and 12% are having an academic degree. More than half of parents described their children's condition as moderate and 64% of their children are not receiving any therapies in treating Autism Spectrum Disorder (ASD). As per the results it was mentioned that the main parent's barrier that made the dental procedure hard to be performed is the difficulty in finding a dentist who understands the child case and professional in treating autism spectrum disorder.

According to the dentist's response it was noticed that almost all of the dentist agreed that they don't have enough knowledge in treating children with autism spectrum disorder (ASD) with percentage of 82%.

**Conclusion:** Awareness should be provided for parents in dealing with children with autism spectrum disorder (ASD) lack of knowledge about autism spectrum disorder (ASD) as per the response of the parents of autism children in Dubai Autism Center. There a clear lack of dental knowledge and experience regarding treating autism spectrum disorder (ASD) among the participant group of the dentists of Public Health Centres in Dubai Health Authority.

**Keywords:** Autism; Parents' Dental Knowledge; Oral Health Care

### Introduction

Autism spectrum disorder(ASD) is a common ill disorder characterized by difficulty social communication and behavioural inter-

est and also causes psychological difficulties in children, so those youngsters become troubled when they are surrounded by a normal atmosphere of people since they lack the capabilities of a usual human being [1,2].

Due to several signs and symptoms of ASD its mandatory to diagnose and provide a medical care for affected children, this includes different specialist and subspecialist such as general practitioner for primary diagnosis, referring of the patient to relevant professionals or paediatricians who are able to confirm the diagnosis or refute the ASD diagnosis [3]. Psychologists psychiatrics, and psychotherapists who are able to diagnose the autism spectrum disorder. They can assess the care need of children with ASD and their families regarding the speech and language therapists, they have the ability to assess the speech and evaluate any possible hearing impairments, and assessing the oral health care of the child whereas it's been established that poor oral health and the diseases may negatively affect the child's health and quality of life. De-spite the importance of oral health care disparities exist for children with special needs in access to and practice oral care [3,4].

Unfortunately oral health doesn't demonstrate much about autism patients since there is no an exact oral disorder connected as a symptom to autism patients. Oral habits, on the other hand plays an important role in emphasizing the disorder [5].

Some barriers could be faced during dental treatment from autism kids, including hyperactivity that would result from attention deficiency and low frustration threshold. So dental team should be aware of these issues [6].

However because children with autism spectrum disorder (ASD) are having multiple medical issues, most of the dentists cannot satisfy the children with the treatment provided [3].

Most published studies have reported data collected from parents of disabilities of different disease rather than autism spectrum disorder (ASD) such as Down syndrome and cerebral palsy, and most of the published studies have been mentioning the oral health care at home, however our study will show the obstacles that are faced by parents during oral health care at home and the barriers to dental care and the

knowledge of the parents about their child's condition.

Also, no studies have been conducted related to the assess of dental knowledge of dentists that interact with children diagnosed with autism spectrum disorder(ASD) and their previous experience in treating children with autism spectrum disorder(ASD), so

this study evaluated the Parents and dentists' knowledge, experience and practice regarding oral health care toward children with autism at Dubai Health Authority and Dubai Autism.

## Methods

This study is a cross-sectional survey undertaken at Public Health Centres in Dubai Health Authority (DHA) and Dubai Autism Center within Dubai between March and June 2019. Ethical approval was obtained from the University Student Research Evaluation Committee (USREC), DHA, Dubai, UAE. And Dubai Autism Center.

Dubai Autism Center were approached through the administrative office to distribute the 86 questionnaires to parents of Autism children at the age between 6-16. And for the dentist's questionnaire we've met most of dentists and distributed the survey and collected them immediately. A total of 73 copies of the dentist's survey were distributed to five centres based on the number of the dentists working at each center who agreed to participate in the study, and only the completely answered copies were included in the study for both dentists and parents.

The parents questionnaires were formulated in simple Arabic language and English language Each copy of the questionnaire had a cover letter with a consent form, which served as an invitation and explained the purpose of the study, Name and the birthdate was optional for the confidentiality of the participants and the target group included dentists and parents of autism children.

30- item questionnaire included demographic questions concerning gender, age, educational level of the parent, child's general health and access to health care, behaviour and the social communication of the child, child's oral care, barriers to dental care and the parent's background.

17-item questionnaire included demographic questions concerning gender, age, educational level, and type of specialty, the dentist's knowledge and experiences with autism child successful of the previous treatments, the knowledge in dealing with autism children during dental procedures appropriate age for a first dental visit, and this is all for the dentists questionnaire.

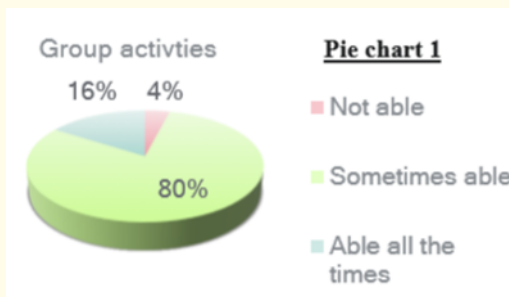
## Data analysis

The comparison was made between the child's general health and access to health care, behaviour and the social communication

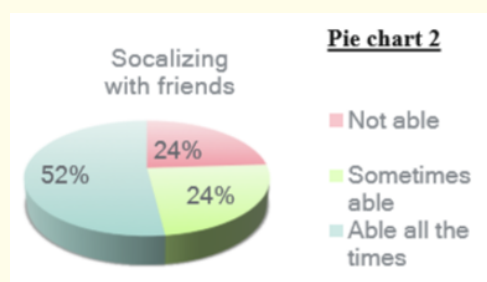
of the child, oral care, barriers to dental care and the parent's background. And for the dentists the comparison was made between the dentists' knowledge in dealing with autism children and educational level, and type of specialty, the dentists' knowledge and experiences with autism child successful of the previous treatments, the knowledge in dealing with autism children during dental procedures appropriate age for a first dental visit, and this is all for the dentists' questionnaire. And all values were tabulated and resulted and statistically analysed using SPSS.

## Results

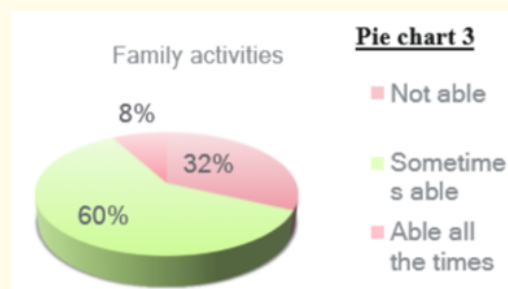
Of the 83 questionnaires distributed to Dubai Autism Center, 25 were collected with a response rate of 29.07% (11) 44% [Males and] 56% [Females]. Almost half of the children (48%) are having an average health status and (32%) of the children are having good health, while (16%) of the children are having a poor health status, and only (4%) of the children are having excellent health status. Most of the parents didn't know about their child's autism type (72%), (17%) mentioned that their children are having a pervasive developmental disorder and the rest (11%) are having autistic disorder 'classic autism'. (86%) of the parents described their child's condition in severity as a moderate, (14%) as a mild, (12%) severe and the rest didn't know how to describe the severity of their child's condition. In addition, (64%) of the children are not receiving any therapies. For the child's behaviour and social communication, (56%) of the patients are communicating with their surroundings with limited verbal communication and (44%) have no verbal communication. The autistic children who have limited or little understanding are (76%) while the rest of the patients (24%) understands most or all of the language when they communicate with others. As per the results, most of the children were sometimes able to get involved in the activities. As shown in Pie chart 1 that most of the children (80%) are sometimes able to participate in group activities, half of the children (52%) are always able to do some activities with their friends as shown in Pie chart 2 but when it comes to their families they have less communication comparing to their friends as shown in Pie chart 3. As mentioned in the Pie chart 4 that more than half of the children (56%) are not able to use the sign language during their communication with the surroundings. Half of the children (48%) were not able to communicate with written words as shown in Pie chart 5.



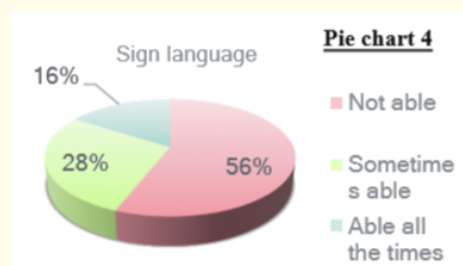
Pie chart 1



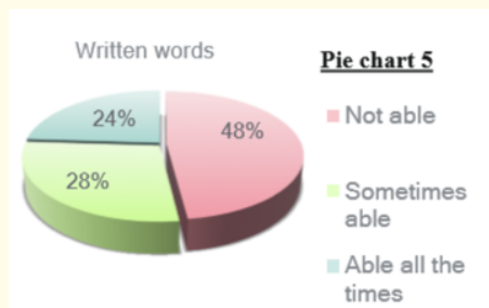
Pie chart 2



Pie chart 3



Pie chart 4



Pie chart 5

brushing twice daily. Parents of autism children were questioned about the child's past dental history in the past 12 months.



Pie chart 6

Describe your child's dental routine at home		
Type of the brush	Manual:	84%
	Electrical:	13%
Times per day of brushing teeth	Twice:	28%
	Once:	40%
	None:	32%
Using floss	Yes:	36%
	No: 64%	
Needs assistant while brushing	Needs a brushing assistant:	68%
	Doesn't need a brushing assistant:	32%

Table 1:

Almost 3 quarters (72%) of the children need some help during toileting as shown in pie chart 6. And more than half (56%) of the children need some help during brushing and (40%) needs complete help during brushing as shown in pie chart 7, and (56%) of the children need complete help during bathing. 40% of the autistic children first visit was between 0 and 5 years old, 36% was between 5 and 10 years, 16% was above 10 years old and 8% never visited the dentist. Almost (80%) all autistic children voice always indicates their general mood, 16% sometimes shows their mood and 4% of them never relate their voice tone to their mood. It was mentioned in the results as shown in table 1 that more than half (64%) of the children are not flossing and (84%) of them using the manual brush while (68%) need help in brushing their teeth. (40%) of the children are brushing their teeth once per day, (32%) of the children are not brushing at all, and (28%) of children are



Pie chart 7

In the past 12 months:		
	Yes	No
Did your child had a toothache	36%	64%
Did your child received any restorations	29%	71%
Did your child had an extracted tooth	12%	88%
Did your child had any ulcers in her mouth	12%	88%
Did your child had a dental emergency treatment	20%	80%

Table 2:

According to the results it showed that the (72%) of the parents were not concerned about the fees as much as the quality of the treatment and they're not facing any obstacles regarding the fees of the treatment but (28%) of the parents couldn't do provide the treatment for their children because of their financial issues. And

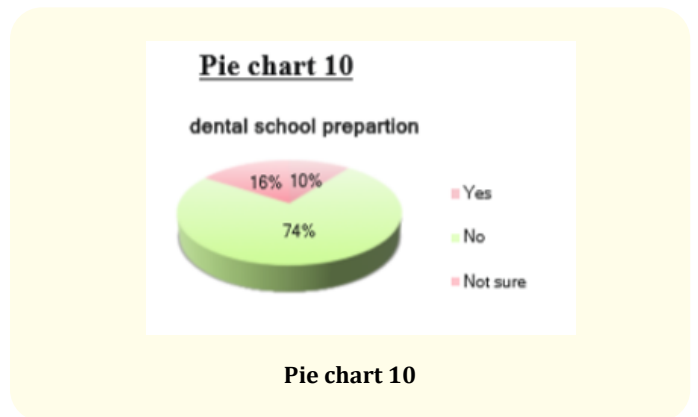
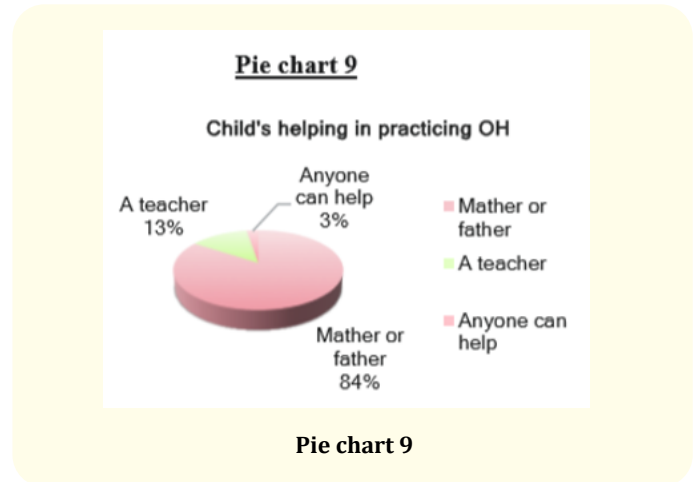
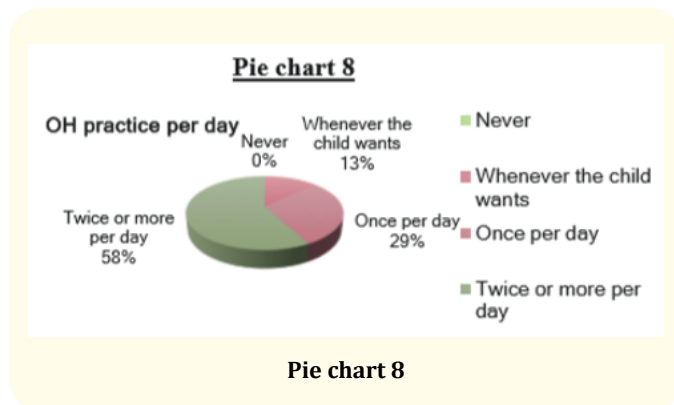
the main barrier which is faced by the almost all parents (88%) regarding the dental procedure is the difficulty in finding the dentists who understand their child's case and (12%) of the parents cannot convince their children to visit the dentist.

(76%) of the surveyed parents were the mothers at the age of 31- 40 (72%) and only (4%) were fathers. Sisters were (16%) and brothers were only (4%).

(80%) of the parents have academic degree, (16%) have only high school certificate and (4%) didn't complete high school.

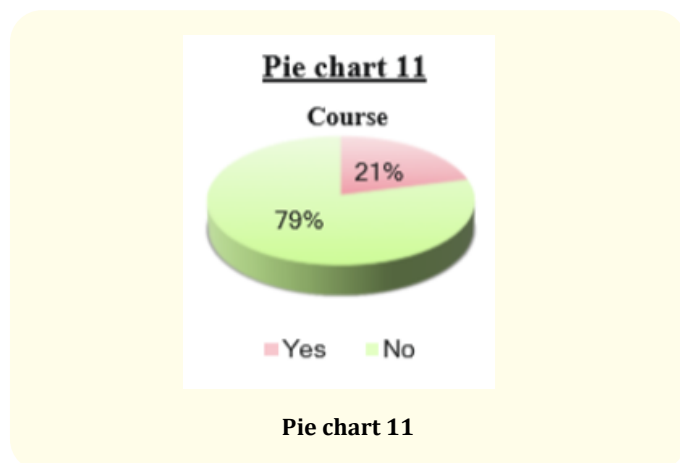
In the dentist's results, 73 questionnaires were distributed on the dentists in Public health centers in Dubai Health Authority. 38 questionnaires collected with a response rate of 27.74%, ({36.4%} where males and {63.6%} were females). 66% of the surveyed dentists had master's degrees, 34% have only bachelor's degree. 74% of the dentists treated autism children previously and 26% didn't treat any autistic patient. 76% of dentists receives less than 5 patients a week, and the other dentists (24%) doesn't receive any patients. 66% of the dentists agrees that autism children should visit the dentist from 1- 3 years, 18% believes that the proper age is 3-6 and the other 16% thinks that the child should visit the dentist after 6 years. 58% of the dentists believes that autistic children should practice OH twice a day, 29% think that once is enough, and 13% says that whenever the child wants as it is shown in pie chart 8. 84% of the dentist agrees that parents should help the patient in practicing OH, 13% believes that teacher is responsible about this and 3% says anyone can help the child as it is represented in pie chart 9. It was also noticed 74% of the dentists were not pre-

pared in dental schools for treating autism patients, 16% are not sure and 10% were prepared in their schools and this is presented in pie chart 10. 50% of the dentists finds it difficult to treat an autistic child, 32% of them can treat those patients and 18% don't know. 55% of the dentist don't know about autism treatment, 37% have adequate willingness to treat autism children and 8% have adequate willingness for treatment. 89% of the dentists agrees that autism patients.



Parents and dentists' knowledge, experience and practice regarding oral health care toward children with autism at Dubai Health Authority and Dubai Autism Center in 2019 should use tooth brush and tooth paste, 8% should only use mouse rinse, 3% should use Siwak. 79% of the dentists never attended any course about autism children dental care and 21% attended courses as it

was observed in the pie chart 11. 87% of the dentists believes that they should attend special courses for autism children dental care, 13% thinks that it's not needed.



## Discussion

The present study was designed for parents of autism children in Dubai autism centre and the dentists of Public health centres in Dubai Health Authority in the Emirate of Dubai. Due to the patients' status and difficulty of collecting the data from this type of patient and lack of some dentist's cooperation, the responses were less, since we received 25 out of 86 questionnaires (29.07%) for the parents and 39 out of 73 questionnaires for the dentists (52.05%) [7]. As it was observed in the parent's questionnaire results, 56% of the parents only have high school certificate degree which directly affects their knowledge about their children's condition such as the type of their children autism disease. And this was inversely proportional to the previous study that was conducted in Southern California in February- 2019 that showed that most of parents of the autistic children have College degree. Also, the same study it was agreed by the surveyed dentists that all of them are well prepared to treat autistic and special needs children and this was totally opposite comparing to our research results since we found out that the 74% of dentist were not well prepared to treat autism patients [8]. Also as it was observed in the results that of the autistic patients' voice indicates their general mood (if they are happy, calm or sad), and this was proven by the study that was published in June - 2013 about the role of emotion regulation in Autism Spectrum Disorder, that states that patients emotions and behaviour is observed by their tone of voice [3].

Limitations. Unfortunately, due to the patient's status it was difficult to contact their parents directly to give them their questionnaires, so questionnaire we given to the administration of Dubai Autism Center and they distributed it to them, so as a result some of the patients of the patients didn't reply to the questionnaires. Also, for the dentists, some of them we always busy with their schedule so sometimes we were not able to meet them.

## Conclusion

Among the dentists those were surveyed, it was observed that most of them have low knowledge about dealing with autistic patient and their reaction toward any dental procedure. Also, the parents have less knowledge about their children autism type and oral hygiene instructions, so educational Brochures were given to the parents for awareness about the oral hygiene instructions for their children and how to differentiate between the types of autism for their children.

## Future directions

Some special courses should be suggested to dental schools for dentist's awareness in Gulf area. For instance, Oral health care for children with special needs course at A. Dugoni school of dentistry - USA and Postgraduate Diploma in clinical Dentistry at university of Dunedin, New Zealand. Parents and dentists' knowledge, experience and practice regarding oral health care toward children with autism at Dubai Health Authority and Dubai Autism Center in 2019.

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